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ABSTRACT

Major policy options for American higher education in the next two decades, which is a period of potentially unused capacity, are considered. The focus is upon both public policies relating to higher education and policies of colleges and universities individually. It is suggested that the number of enrollees in higher education is partially determined by conscious policies of higher education institutions, employers, and government. Four options for keeping the present higher educational system intact even if enrollment should decline substantially are as follows: (1) redirect resources toward higher quality; (2) redirect resources toward research and public service; (3) redirect resources toward new student clienteles; and (4) retrenchment. Types of adult learning and the role of higher education in adult learning are considered. Established guidelines or principles derived from experience with adult learning in higher education which may be applicable to institutions or to funding agencies are presented. (SW)

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Adult Learning, Higher Education, and the Economics of Unused Capacity

Howard R. Bowen

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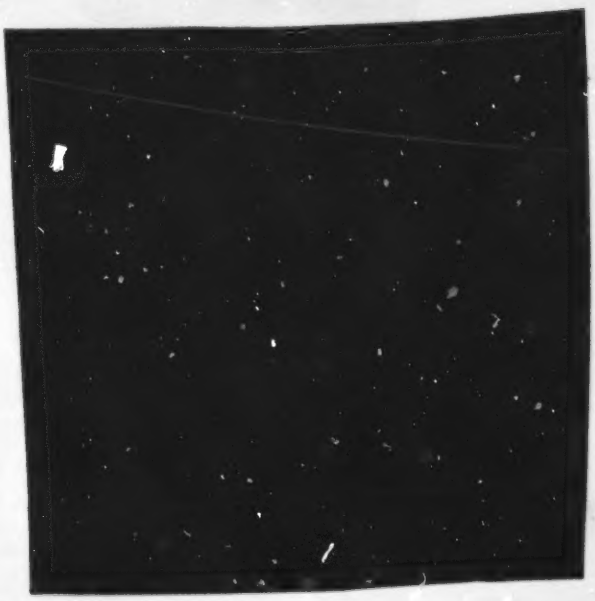

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College Entrance Examination Board, New York, 1980

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Funded by the Exxon Education Foundation, FDLS develops consensus and support for strategies, services, and policies that can best meet current and projected needs of participants and providers in a learning society. To this end, the program solicits and relies on the participation of professional people in the field, public policymakers, and the larger community. A major purpose of the Exxon grant is to promote the mobilization of additional funds and other resources necessary for major initiatives in this developing field. The initial support covers the project's planning and management, the identification and design of service areas, the review and analysis of public policy, and publishing relevant materials.

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The program is engaged in finding better ways to gauge the needs of learners, in identifying the problems institutions face in meeting learners' needs, in strengthening learning opportunities, and in increasing public, professional, and political understanding of the field. A chief focus of the program is to demonstrate promising new approaches and specific services.

Preface

Clark Kerr, in a recent publication for the Academy for Educational Development (Occasional Paper #8, 1978), observed: " . . . what was once a slogan of 'lifelong learning' is now becoming a reality and bringing many new people into higher education all of their lives." As Howard Bowen observes in the pages that follow, arranging to accommodate increasing numbers of adults is a highly attractive option to be considered by our nation's postsecondary institutions as the number of students in the traditional age group declines. While not discounting the importance of other possible options open to our institutions, such as increasing the quality of their offerings; expanding research and public service activities; or even large scale retrenchment, the important message is that serving new clienteles and bringing "nontraditional study into the mainstream" is the most desirable and significant option that is available to higher education institutions in terms of national economic gain, cultural advancement, and institutional survival.

Recent reports from the National Center for Education Statistics (NCES) indicate that there is already substantial national momentum in serving new clienteles, even if the evidence of institutional conversion is not yet so obvious. For example:

- More than 5,000,000 adults are now enrolled in degree credit programs on a part-time basis; this is more than 40 percent of the total higher education enrollment.
- In the last decade, the number of institutions reporting programs to serve adults has increased 115 percent, with the total including now nearly all the higher institutions in the country.
- Another 10,000,000 adults are now attending programs, courses, and other learning activities in, or offered by, the nation's colleges and universities.

When one considers that there are only about 7,000,000 full-time students in the country, the relative significance of this growing enterprise is clear. It is also clear that during the last ten years adults in American society have been searching for answers to their personal and professional needs within the higher education system.

With such evidence in hand, Howard Bowen speculates: "the much-heralded future decline in enrollment may be by no means inevitable." To support this speculation he has made some projections of possible enrollment in higher education through the year 2000 that should be studied carefully by every educational manager and public policymaker. Although these numbers

are by no means certainties for the next two decades, they have a pragmatic quality that should assure that their implications receive more than casual attention from institutional leaders and policy people in this nation.

The impact is neither casual nor coincidental. Sometime within the next two years it seems likely that the number of part-time adult students in higher education will exceed the number of full-time traditional students. It is also possible that if, for whatever reasons, the trends identified by Bowen persist, by the year 2000 adults may represent nearly 75 percent of the total enrollment in higher education.

In the face of so much current doom and gloom about the future of higher education in America, it is refreshing to have a person of Bowen's stature looking at the future from a different perspective, a perspective that produces more good news than bad. However, I think Dr. Bowen demonstrates that the "good news scenario" isn't simply an automatic consequence of passing time; instead, that institutional change and public support are essential elements, and that these are attainable.

We hope very much that this paper will receive wide attention from trustees, university and college presidents, and public policymakers. If a public debate ensues about the optimism of this report, so much the better. The probable conclusion of any such public debate is likely to be that we, as a nation, want to develop what is here made to seem possible, and that the effort required is worthwhile. That is, after all, the way the best futures are made.

Rexford G. Moon, Jr.
Managing Director
Future Directions for a Learning Society

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Opportunities and Obligations

My purpose in this paper is to explore some of the major policy options that lie ahead for American higher education in the final decades of this century. I shall be concerned both with public policies relating to higher education and with the policies of colleges and universities individually. I shall try to respond to this question: What are the opportunities and obligations of American higher education in a period of potentially unused capacity?

My basic premise is that the United States is committed to becoming what I call "a nation of educated people" (Bowen, 1979). This commitment goes back to colonial times, it was enunciated by the founding fathers, and has been advanced step-by-step through a long series of landmark measures such as the Northwest Ordinance, the Morrill Act, the achievement of near-universal secondary education, the community college movement, the GI Bill, the National Defense Education Act, and many others. Throughout American history, education has been steadily widened and deepened as it has been extended to more people, as formal programs have been lengthened, and as the resources for education have multiplied.

The result of this development, as Lawrence Cremin (1965, p. 42) has suggested, is that the foreseeable future is the first time since the dawn of civilization that appreciable cultural advantages could be conferred on a substantial proportion of the whole population. But despite great progress, the goal is still many decades away. There is much educational work to be done. A period such as may lie ahead, when there may be sluggish growth or even excess capacity in the higher educational system, presents an unparalleled opportunity for advancement toward the goal. It will be no time for resting on past accomplishments or for retrenchment. It will be a time when resources that are already in place should be used to push ahead vigorously toward the nation's ultimate educational objectives.

In 1962, the number of births per year in the United States began to decline. When the decline persisted year after year, educators realized that the number of people of conventional college age would begin to decline significantly about 1980. For at least the past decade, this demographic prospect has been discussed endlessly and has been an unsettling factor as institutional planners have contemplated the future. However, colleges and universities live one year at a time. On the whole, institutional decisions and operations have not been greatly influenced by what has until recently seemed a remote event. But now the event is imminent and it is time for institutions individually, and for federal and state governments

as well, to begin to map out policies realistically related to the enrollment outlook.

Another disturbing factor looming on the horizon is that enrollment may shrink because of an impending decline in the earnings of college-educated people in relation to the earnings of other workers. As the proportion of educated people in the labor force steadily increases, and obversely, as the percentage of less educated people falls, the relative earnings of the college group may slowly decline. From the point of view of an egalitarian society, such a narrowing of the differential would be a favorable outcome of higher education. From the standpoint of future college enrollments it could have a negative effect.

Many observers believe that the combination of the declining number of people of conventional college age and the declining relative earnings of college-educated workers will generate a sharp falloff of enrollment. Such a result is certainly possible. Yet the full-time-equivalent enrollments in higher education could (I am not saying will) hold steady or even increase in the decades ahead. The number of potential learners in our society is ample to maintain or even expand enrollments. The numbers who actually attend are not determined by the impersonal and inevitable forces of nature. They are determined in part by conscious policies of higher educational institutions, of employers, and of government. Doing nothing, that is, maintaining present conditions and allowing enrollments to seek their own level, is simply one of many possible policy options.

But if enrollments should decline in the 1980s, there is still a question of what to do with the potentially unused capacity in the higher educational system. It could be employed in a variety of ways. For example, to improve instructional quality, to mount new and useful programs of research and public service, or to accommodate new types of students. Or it could be shut down and the resources shifted to other uses, or simply left unemployed or underemployed.

My thesis is that any potentially unused capacity that may develop should be regarded as an opportunity rather than as a disaster. A country intent on the goal of "a nation of educated people" should use its higher educational system, not dismantle it. This is especially so in view of the fact that any decline in enrollment is likely to be temporary.

THE DEMOGRAPHIC SITUATION

The demographic situation is very simple. The number of 18-year-olds will be declining all during the 1980s and will level off around 1991 at about 73 percent of the number in 1979. On the basis of these figures, many observers are predicting average enrollment declines of about 25 percent. Some, after taking into account the job market for college graduates, are predicting enrollment declines of as much as 40 percent. They may be right. I argue only that such a drop in enrollment is not preordained. The 18 to 21 age group no longer dominates higher education. With the growth of graduate, professional, and part-time education, the majority of students are beyond age 21. Much of the enrollment growth of recent years has been among the older age groups, and it is likely that this trend will continue. The significance of this development can be easily seen in the fact that the 18 to 21 age cohort contains fewer than 17 million people; whereas in the 22 and over cohort there are 133 million. Thus, a 27 percent decline in 18 to 21 enrollment could be offset by a 3.5 percent increase in the enrollment of

older students. In fact, the enrollments of older persons have been growing steadily at a rate that would exceed 3.5 percent in a decade. Moreover, there is still room for growth in the enrollments of younger persons. For example, there are still relatively fewer poor people than well-to-do people in college today, and attendance rates in some parts of the country are far below those in others.

In the next couple of decades, enrollments could conceivably hold steady or even increase over what they are today. What will actually happen will depend on the kinds of education offered, on convenience of time and place, on the levels of tuitions and fees, on the forms and amounts of available student aid, on the cooperation and support of employers, and on the general level of employment in the economy. It is not hard to imagine conditions, with moderate and reasonable assumptions, in which substantial increases in enrollment would occur. I am not making predictions about enrollment. I am saying only that the range of possibilities is very great and that what actually happens will depend on the policies governments and colleges and universities adopt and not merely on birth rates or blind chance. For an extended discussion of the demographic situation see the appendix to this paper.

It is obvious, however, that the demographic outlook and the weak job market for college graduates could, in the absence of countervailing policies, bring about declining enrollments. In that case, the appropriate policies would be to use existing facilities and staff to improve educational quality; to expand research and public service activities; or to expand enrollments of new students, especially adult learners. The alternative to these options would be to retrench in proportion to the decline in enrollments.

THREE HISTORIC EPISODES OF UNUSED CAPACITY

A first step in considering these options is to review past experience in dealing with unused capacity. It is not correct to assume that American higher education has never before experienced substantial enrollment decline. In the twentieth century so far, there have been three episodes. One of these was during the Great Depression of the early 1930s, when enrollment fell by at least 9 percent; another was during World War II, when the decline was more than 23 percent; and the third was in the early 1950s, after the departure of the GIs, when the decline was more than 13 percent.[1] Table 1 shows how the higher educational system responded to each episode. In no case did substantial cutbacks in number of faculty occur. In the Great Depression, the number of faculty increased, in World War II it held steady, and in the post-GI period it declined by a little more than 1 percent. As to educational and general expenditures, there were substantial cutbacks during the Great Depression but only slight and temporary retrenchment in World War II and no retrenchment at all in the post-GI period. However, in all three episodes, there were substantial cuts in capital expenditures. Indeed, the main effect was a reduction in spending for buildings and equipment. On the basis of these three episodes, one may conclude that the traditional way of handling enrollment decline in the United States has been to maintain faculty, to slow up moderately the growth of current expenditures, but to reduce plant fund expenditures sharply. It did not happen exactly that way in three cases, but generally that was the pattern.

Table 1. Enrollment, Faculty, and Expenditures, United States Higher Education, 1930-1956

	Resident enrollment (in thousands)	Total degree credit enrollment (in thousands)	Faculty (in thousands)	Educational and general expenditures (in millions of 1947-49 dollars)	Plant fund expenditures (in millions of 1947-49 dollars)
1930 . .	1,101	--	82	$529	$175
1931 . .					
1932 . .	1,154	--	101	711	168
1933 . .					
1934 . .	1,055(-9%)	--	109	633(-11%)	52(-69%)
1935 . .					
1936 . .	1,208	--	121	703	79
1937 . .					
1938 . .	1,351	--	136	784	116
1939 . .					
1940 . .	1,494	--	147	872	140
1941 . .					
1942 . .	1,404	--	151	821 (-6%)	72
1943 . .					
1944 . .	1,155(-23%)	--	151	874	36(-74%)
1945 . .					
1946 . .	1,677	2,078	165	983	85
1947 . .					
1948 . .	2,616	2,403	224	1,354	298
1949 . .					
1950 . .	2,659	2,281	247	1,660	406
1951 . .					
1952 . .	2,302(-13%)	2,134	244	1,693(+2%)	355(-13%)
1953 . .					
1954 . .	2,515	2,446	266	1,978	463
1955 . .					
1956 . .	2,619	2,918	299	2,380	586

Source: United States Department of Commerce, Bureau of the Census, Historical Statistics of the United States. Vol. I, pp. 382-85.

This reaction to declining enrollments was doubtless due to a widespread belief, during each of the three episodes, that the enrollment decline would be temporary.[2] Today the prevailing outlook is less optimistic. There is great uncertainty as to when enrollments will recover, if ever, and a sort of fatalistic acceptance of the inevitability of retrenchment.

FOUR OPTIONS

Let me now take up the case for keeping the present higher educational system more or less intact even if enrollments should decline substantially.

Option I: Redirect Resources Toward Higher Quality. Most of the present American system of higher education was created in the 20 years between 1955 and 1975. In 1955 there were only about 2,200,000 full-time-equivalent students. By 1975 there were about 8,500,000, a fourfold increase. Thus, nearly three quarters of the present system was built in a 20-year period of prodigious accomplishment.

Understandably, a great deal of energy and thought went into providing for numbers and less into improving qualitative performance. Large institutions of 10,000 to 50,000 or more students became the predominant instructional vehicle, and education tended to become massive and impersonal. The least privileged members of the student population were often concentrated in large institutions where personal relationships were minimal, where needed special programs were not available, and where the dropout rate was very high. And the institutions were slow to provide student services suited to the needs of the increasing numbers of commuter and part-time students.[3]

There has been an accumulation of deferred maintenance, a backlog of unmet equipment needs, reduced library acquisitions, and widespread employment of part-time faculty. Institutions have not had the resources to explore new modes of instruction and new curriculums or to achieve significant evaluation of performance. Institutions have not been able to offer high-quality programs and facilities for the increasing numbers of part-time and commuter students, many of whom are adults. These students often do not have access to regular and fully qualified faculty, they have limited access to libraries and laboratories, and they lack access to social life and cultural amenities comparable to those available to resident students. There is need for a time of attention to quality, and some of the resources freed by a decline of enrollment might well be diverted to this objective.

Option II: Redirect Resources Toward Research and Public Service. The possibility of unused capacity also creates an opportunity to strengthen research and public service programs. Research expenditures in current dollars have increased steadily. But in constant dollars, they have been fairly flat since 1969. Many close observers of the state of basic research believe that the United States is falling behind. Many also believe that opportunity for the development of younger scientists and other research scholars is shut off by slow growth in research expenditures which creates few jobs for younger people. They also indicate that the cost of equipment and other facilities rises faster than the general price level so that the rate of growth in real terms is even less than is shown by the deflated expenditure figures. Finally, they point out that research support for the humanities and social studies has never approached adequacy and that more funds could be used to advantage in these fields--especially since the employment of humanists and social scientists is likely to be slack.

These same arguments are seldom applied to public service activities. However, a strong case can be made for using some of any future unused capacity to extend and strengthen public service programs. These usually take the form of teaching and consulting. The "students" or "clients" are usually not seeking credits and degrees, but rather are practitioners such as professional people, farmers, business executives, public officials, and so on. There is need for public service programs in fields such as elementary and secondary education, public health, energy, land use, natural resources, state and local government, small business, urban transportation, housing, criminal justice, and so on. Collectively, the colleges and uni-

versities have enormous resources of talent and knowledge in virtually all these and many other fields. Indeed, one of the major social contributions of higher education is the maintenance of a corps of experts who are available to society to help in coping with social problems. These resources could be mobilized more effectively than they commonly are to deal with the ongoing problems of a complex industrial society.

Option III: Redirect Resources Toward New Student Clienteles. A third option would be to expand enrollments, especially of new student clienteles. Indeed, the emergence of unused capacity may be regarded as a welcome and unprecedented opportunity to get on with the business of achieving "a nation of educated people."

No one can doubt that there are literally millions of people not now served by higher education who might be added to the student bodies of colleges and universities. Consider, for example, the fact that people from low-income families attend in proportionately much smaller numbers than those from high-income families, that the percentage attending college in some states is half what it is in other states, that the needs and requirements for continuing education among professional and business groups constantly expand as the nation moves toward the postindustrial society. Consider also that the spread of higher education has tended to expand the ranks of those who will want their children to attend college and the numbers who will themselves take part in adult learning activities.

The number of people who could benefit from higher education is enormous. To cite a few figures (see Table 2), only 17,500,000 persons or 14.7 percent of the adult population (25 years of age and over) are college graduates; another 15,500,000 have attended college without graduating; and 85,800,000 persons over the age of 25, or nearly three quarters of the adult population, have never been to college. There are many persons among all three of these groups who are potential candidates for higher education. Even in the 18 to 24 age group only about half ever attend

Table 2. Years of School Completed, 1976, Persons 25 Years of Age and Over

	Number (in millions)	Percentage
Elementary school		
0-4 years	4.6	3.9%
5-7 years	8.4	7.1
8 years	11.5	9.7
Subtotal	24.5	20.7
High school		
1-3 years	18.2	15.3
4 years	43.1	36.3
Subtotal	61.3	51.6
College		
1-3 years	15.5	13.0
4 years or more	17.5	14.7
Subtotal	33.0	27.7
Total	118.8	100.0

Source: Statistical Abstract of the United States, 1977, p. 136.

and only a fourth ever graduate from college. There are vast numbers of people who are candidates for further higher education. The numbers are so large that even very small changes in the percentages attending would make enormous differences in enrollments. For example, each increase of 1 percent in the number of persons over the age of 24 attending college would add a half million full-time-equivalent enrollments.

The percentage of these potential students who will actually enroll will depend on a great many factors, including: the fees charged, the financial aid available, released time from work, the kinds of educational programs offered, the excellence of these programs, convenience of time and place, the kinds of information disseminated about educational opportunities, the degree of support and guidance available to independent learners, the status of experiential learning, the provisions for handicapped persons, and the social and cultural opportunities provided.

Young people who have not completed high school form a new and largely untapped body of potential students. At one time, many colleges offered preparatory programs designed for students who did not have access to high school in their home communities, but these programs disappeared as high schools were established in virtually all communities. Many colleges and universities at one time conducted demonstration schools in connection with their programs in teacher training and educational research, but many of these have also disappeared in recent years as teacher internships and educational research were shifted to regular public schools. Considering the uneven quality of secondary school preparation, there is need for some new secondary schools operated for purposes of demonstration and standard-setting. Colleges and universities are better equipped than are any other institutions in our society to operate such schools.

There are several new clienteles waiting in the wings who could, with great benefit to themselves and to society, be served by the higher educational system. Much of any unused capacity that may develop might be used in serving these people. It would be short-sighted to shut down this unused capacity when the amount of potential educational work to be done is so great.

Until now, most colleges and universities, with the exception of the community colleges, have on the whole not brought the education of nontraditional students into the mainstream of their operations. The reasons for this are partly that funding agencies have not provided the needed operating funds and student aid, and partly, it must be admitted, that there is a certain squeamishness among many institutions about going wholeheartedly into the nontraditional educational business. In my opinion, it is time for institutions of all kinds to fold nontraditional study into their regular programs--assigning regular faculty and facilities to it, including it in regular degree programs, providing adequate financial aid, and conducting it in a way that is comparable in status and resources to conventional instruction for traditional students. The appearance of unused capacity in the traditional programs offers a marvelous opportunity for institutions in cooperation with funding agencies finally to bring nontraditional study into the mainstream. A later section of this report deals in some detail with this issue.

Option IV: Retrenchment. If enrollments should decline, the most obvious response would be to cut back the higher educational system. This could be done by general across-the-board retrenchment, by cutting back selected instructional programs, by eliminating some institutions, or by some of all three. It might mean shutting down some physical plant or transferring it

to noneducational uses, discharging some faculty and staff, cutting purchases of goods and services, and otherwise scaling down operations. Retrenchment would presumably take place on the assumption that some of the resources devoted to higher education would be more productive if shifted to other parts of the economy.

One could imagine that buildings might be shifted into alternative uses. For example, they might become homes for the aged, mental hospitals, secondary schools, commercial office buildings, minimum security prisons, or industrial plants. The difficulty is that most academic plants are quite specialized and are poorly located for alternative uses. Moreover, the cost of remodeling for new uses would, in most instances, be high. Indeed, it might be decided in some cases that it would be cheaper to shut down a redundant plant or even demolish obsolete buildings, thus saving operating costs, rather than transfer them to new uses. In general, it is hard to believe that the gains to society through shifting existing buildings to new uses would be substantial. However, there is no doubt that retrenchment would reduce the need for operating funds to maintain existing buildings and for capital funds to build new ones.

Retrenchment might free land that could be developed for industrial, commercial, or residential uses. Some land now in use might be disposed of. Moreover, most institutions hold surplus land for future expansion. No doubt much of this land could be sold or leased long term on the assumption that future expansion is unlikely. Most experienced educators would look askance at disposal of land that is held for future use, partly because present assumptions about the distant future often prove unwarranted and partly because control of land adjacent to campuses is often needed to prevent urban blight. But in some cases long leases or sales might be feasible, and in many cases the continued purchase of land might be brought to a halt.

Still another source of possible saving would be the liquidation of equipment. This would probably not be very lucrative because academic equipment is highly specialized and not easily adaptable to noneducational uses, and much of it is old and obsolete. Moreover, much of it would be needed for whatever instruction would be continued. For example, a cutback in an institution's enrollment would usually not eliminate the need for specialized electron microscopes or computers, though it might reduce the need for typewriters and desks. However, it is likely that retrenchment would reduce the rate at which equipment would be replaced and would, therefore, lower costs.

My opinion is that retrenchment in buildings, land, and equipment would not yield much return through shifting assets to new uses, but would tend to reduce ongoing capital expenditures. As I mentioned earlier (Table 1), in all previous periods of enrollment decline in this century, capital expenditures were drastically reduced.[4]

Another and more important area for cutbacks would be faculty, other staff, and purchases of goods and services. These items make up the bulk of all operating budgets. The short-term organizational problems connected with such retrenchment would, of course, be severe. The consequences for morale would be serious, the ability to maintain cherished traditions might be sacrificed, and the effects on institutional reputations might be adverse. Nevertheless, such cuts would be possible and inevitable if operating funds were cut.

The ultimate question is this: Would the human and physical resources employed in higher education be more productive from the social point of view if they were retained in higher education and used to enhance quality, to

expand research and public service, or to serve new student clienteles? Or would they be more productive if they were diverted to other industries?

One cannot be sure what alternative uses would be made of the resources shifted away from higher education. Perhaps the most plausible assumption is that they would eventually be spread around the economy among various industries and organizations in the private sector and among the various branches of government more or less in proportion to the outputs of these other sectors. With this assumption, how valuable would be the services of these resources if they were thus dispersed, compared with the value of their services if they were retained in higher education? My opinion based on my studies of the outcomes of higher education (Bowen, 1977) is that the return on investments in higher education are substantially higher than those in the rest of the economy when one counts the economic return in higher earnings of college-educated people, the many benefits in the form of human development, and the numerous returns to society. The current political climate, on the other hand, seems to favor cutting back tax-supported activities such as higher education in favor of personal disposable income to be spent on goods and services for private consumption. However, the evidence on public attitudes toward education is mixed. On the one hand, many proposed local school bond issues have been defeated, attitudes similar to that toward Proposition 13 may be spreading, the fighters in the war against inflation are calling for curtailment of public spending, and political statements critical of higher education are frequent. Yet, on the other hand, college enrollments have held up surprisingly well, the polls have indicated consistently that an overwhelming majority of people want their children to attend college, older adults are flocking to college as never before, and Congress has just handsomely expanded student financial aid to include substantial provision for middle-income groups. So I am not prepared to assert that the people of this country value higher education so little that they want it partially dismantled.

If cutbacks in the expenditures of academic institutions are made, they should be made primarily in nonfaculty staff and in goods and services purchased from the outside, not in faculty. Studies of institutional expenditures show that as institutions become more affluent they increase employment of nonfaculty personnel--mainly administrators, clerical people, blue collar workers--more than they increase employment of faculty; and they also increase purchases of goods and services from outside vendors more than they increase employment of faculty. This behavior in times of increasing prosperity suggests that the less urgent marginal expenditures are those for nonfaculty personnel and outside purchases of goods and services, and that at a time of retrenchment the major cuts should be among these budget items rather than faculty. This conclusion is reinforced by the likelihood that nonfaculty persons are less specialized than faculty and, therefore, would experience easier mobility from higher education to other industries.

A decision one way or the other on the retrenchment of higher education is today premature. The future is uncertain. The range of possible enrollments is very great. Even if a decline in enrollments should take place in the next decade or two there is a fair probability that they might recover in later decades.

The higher educational system has been built up at great cost and effort. While it has weaknesses and problems, it is the world's foremost higher educational system. It represents a noble experiment in which the nation is trying to bring enlightenment to the greatest possible proportion of its

people. The experiment is far from complete; its purposes have only been partially fulfilled. To cut back in the near future because of what might be only a temporary decline in number of students would be shortsighted. It would be better to maintain the system at or near its present scale through a balanced program that included advancement of educational quality, strengthened research and public service activities, and the addition of new student clienteles.

All three parts of this program would be important to the nation's advancement and welfare and to the stability of higher education. Together they would form a balanced program that would involve all types of institutions including two-year colleges, liberal arts institutions, state colleges, and research universities. Of the three potential uses of excess capacity, however, the addition of new clienteles--mainly adult learners--is the most urgent and the most significant. It holds the greatest promise for the economic and cultural advancement of the nation and, therefore, carries the highest priority. In the remainder of this paper, I shall concentrate on the role of American colleges and universities in adult learning.

PURPOSE, SCOPE, DEFINITION

The Purpose of Adult Learning. The purpose of adult learning is the same as that of all learning, namely, to give each person the opportunity, the encouragement, and even the obligation to realize his or her unique powers as a human being. As Thomas Carlyle said so incisively: "That there should one man die ignorant who had the capacity to learn, this I call a tragedy. To impart the gift of thinking to those who cannot think, and yet who could in that case think; this one would imagine, was the first function a government had to set about discharging."

So long as education is largely confined to youth, raising the intellectual and cultural level of the population is a slow process. Only about half of those in each cohort of people 18 years old ever attend college and only about a fourth ever receive first degrees.

It is well known, however, that many more than one-fourth of the people are educable at the college level or could become college material, given different environmental circumstances, life experiences, and kinds of higher education suited to their motives, aptitudes, and circumstances (Bowen, 1977, pp. 347-56). At the present rate of attendance and graduation, it would take 50 to 60 years to raise the educational level of the population to the point at which merely one-fourth were college graduates. But there is no need to wait that long. The time required to bring about "a nation of educated people" could be greatly shortened. This could be done partly by increasing the percentage of youths attending and partly by enlarging the educational opportunities for adults beyond the usual college age. It is not necessary to wait half a century to bring the educational level of the population up to that of the present 18-year-old cohort. The task is to open up opportunity and to quicken the pace at which the general level of educational attainment in our society is raised.

There are arguments, of course, for emphasizing the widening of educational opportunity for youthful adults. The costs in foregone income, inconvenience to families, and disruption of work are less in youth than in later adult years. Young people are more likely than are older persons to have the advantage of devoting full time to learning and to campus

residency. Also, the number of years over which the educational investment can be amortized is greater for young people than for older ones. On the other hand, it is well established that adults beyond the usual student age have not lost their intellectual powers. They are more settled in their objectives, can relate learning to practical experience, and have the maturity to understand and appreciate ideas that are lost on most youthful learners. Moreover, learning in the mature years is less likely to become obsolete than that acquired in youth. There is much to be said for learning in the years of maturity--even up to old age.

The Scope of Adult Learning. Adult learning is not sharply distinguished from youthful learning except for the experiences and life circumstances of the learners which affect their interests and their availability for various modes of instruction. One of the cliches of educational literature is that adult learning occurs in many ways and through a variety of facilities and institutions of which higher education is only one. There are indeed many institutions, facilities, or circumstances under which learning takes place, among them the following (see Cross, 1978, p. 8; Cremin, 1976, pp. 24, 29):

Institutions devoted wholly or in part to adult learning through formal instruction, creation of contrived environments conducive to learning, on-the-job training, and related activities

College and universities
Nonprofit vocational schools
Proprietary vocational schools
Elementary and secondary schools
The armed services
Government bureaus
Business firms
Professional associations
Labor unions
Libraries
Museums
Churches and synagogues

The media of mass communications

Books
Periodicals
Newspapers
Posters
Radio and TV
Recordings
Theaters
Motion pictures
Conventions and conferences
Public lectures and demonstrations

Interviews with professional persons or other informed individuals

Physicians
Dentists
Lawyers
Tax experts
Psychologists
Clergymen
Architects
Interior designers
Government officials
Bankers
Insurance brokers
Investment counselors
Mechanics
Travel agents
Salespersons

Less formal circumstances

Quiet meditation
Conversations with family members and friends in the home, in the restaurant or bar, at the cocktail or dinner party, in the bus or carpool, on the golf course, and wherever people meet and converse
Observation of the natural and social environment in which individuals find themselves in the course of daily life or which they seek out as when they travel, go for walks or drives, make visits, etc.
The general flow of life experiences

Many of the learning facilities and situations that are available to people were described in an important book by Fritz Machlup (1962). His conclusion (p. 362) was that knowledge production accounted for 29 percent of the GNP in 1958 and was indeed a major part of the national economy. His definition did not include the less formal and more spontaneous circumstances in which learning occurs, and, therefore, his estimate was almost surely on the low side. But there is no doubt that a substantial part of what we call the national economy consists of a cluster of institutions, industries, and activities that produce learning opportunities.

When one considers learning in all its ramifications, it becomes clear that it is ubiquitous. One can scarcely spend a waking hour without learning something (and the subconscious may be working even during sleep). Every individual is bombarded with facts, news, advice, conversation, entertainment, formal instruction, personal observations, random thoughts, and incidents that result in learning. In addition, almost all individuals seek out experiences and activities from which learning is derived. Learning thus becomes almost synonymous with life. Every moment of life provides data or experience from which learning is or can be sifted out. To be alive is to learn. It should be noted, however, that not all learning is beneficial. One can learn mistaken facts, false theories, bad habits, evil thoughts, criminal behavior, or slipshod work habits. One of the goals of formal education is to direct learning into constructive channels.

The role of universities and colleges in adult learning is in some ways a modest one. Much adult learning occurs without benefit of institutions of higher education. However, the role of colleges and universities is extremely significant. Not only do they conduct much of the formal instruction for adults, but they also undertake most of the research that is the source of the knowledge to be learned, and they train most of the professional people who are involved in adult learning in settings outside higher education institutions.

What Is an Adult? The dividing line between childhood and adulthood is indistinct. Adulthood is a matter partly of chronological age and partly of maturity. In recent decades, however, the definition of adulthood has been sharpened. This has come about in two ways. First, by constitutional amendment--persons of 18 years and over were declared to be adult citizens. Moreover, during the turbulent 1960s the relationship of college students to their institutions was changed. Whereas previously that relationship had been one of minor child to institution in loco parentis, the relationship became that of adult citizen to public institution. These two changes mean that virtually all of higher education must be classed as adult learning, and that almost none of it may be regarded as childhood learning. The adulthood of college and university student bodies has been reinforced by the rapid relative growth in numbers of students beyond the traditional college age of 18 to 21. A few of these older students are full-time undergraduates, most are part-time undergraduates or are part-time or full-time graduate and professional students. Altogether the number of students who are beyond the age of 21 is about equal to the number who are 21 or younger (see Table 3). The higher educational system is no longer a place for children; it has become almost exclusively an institution for adults.

Table 3. Percentage and Number of Total Population Attending College by Age Groups, 1976

Age group	Number in the population* (in thousands)	Percentage attending†	Number attending (in thousands)
16-17	8,397	3.4%	285
18-21	16,771	33.4	5,602
Subtotal	25,168	23.4	5,887
22-24	11,395	16.8	1,914
25-29	17,806	9.8	1,745
30-34	14,238	5.7	812
35 and over	89,718	1.4	1,256
Subtotal	133,157	4.3	5,727
Grand total	158,325	7.3	11,614

*Source: Bureau of the Census, "Projections of the Population of the United States, 1977 to 2050," Current Population Reports, Series P-25, No. 704, July 1977, pp. 28, 37-60.

†Source: Bureau of the Census, Social Indicators, 1976, 1977, p. 301.

TYPES OF ADULT LEARNING AND THE ROLE OF HIGHER EDUCATION

In sorting out the role of higher education in adult learning, it is useful to distinguish five broad categories of adult learning:

1. Environmental learning refers to that ubiquitous and mostly unintentional learning derived from the environment in which people find themselves and which flows spontaneously from the stream of people's daily experiences. The role of educators in this type of learning is mainly indirect. Through the education of large numbers of individuals, educators hope to improve the general environment, to elevate the culture, and thus to improve the content of the social environment in which much learning occurs. They may also attempt to affect the environment directly through public lectures, writings, artistic exhibits and performances, broadcasts, or beautiful grounds and buildings. But their direct influence in the multifarious learning environment can only be described as minute.

2. Hobby learning is related to leisure and household interests. It includes, for example, learning to play bridge or golf, to fill out personal income tax forms, to be a gourmet cook, to do needlework, to train dogs, to cast flies, to collect coins, to read plays, and so on. These are legitimate activities, and many people may gain great satisfaction from learning about them. The dividing line between hobbies and vocations is indistinct. One person's hobby may be another's vocation, or vice versa. Also, the distinction between hobby learning and higher learning is fuzzy. Some hobbies or household interests involve serious study of academically respectable subjects. The distinctions are important, nevertheless, from a financial point of view. The categories of learning associated with literacy, vocations, and higher learning all have broad social benefits that render them worthy of public subsidy, whereas hobby learning is likely to yield mainly personal benefits to individual learners. Hobby learning, therefore, may often be judged, rightly I think, as not worthy

of public subsidies. Failure to make the distinction between hobby learning and the other types of learning puts all adult learning in a weak position to seek public subsidy. When a political leader wishes to oppose financial support for adult learning, he or she can couch the argument in terms of macramé, wine tasting, or belly dancing and can argue that such activities, while entirely honorable, ought to be financed through user fees rather than public appropriations. Unfortunately, this argument tends to be carried over to all adult learning. Yet, quite clearly, adult learning related to literacy, vocations, and higher learning yields social benefits comparable to those of the traditional programs of schools and colleges and are as worthy of public subsidies of both institutional and student costs.

In a recent speech Dixy Lee Ray, Governor of the State of Washington, offered the following comment: "This is a time for courage. It is a time for all of us--trustees, governors and lawmakers--to become more alert to what our schools are teaching and what they are not teaching. It is a time for you to put your foot down, if you must, and make some sensible determinations about what belongs in the curriculum and what does not. I am not advocating that you begin meddling in the curricula for the sake of meddling. I am suggesting you become aware of what your institutions are teaching that you may not realize they are teaching. May I offer a pithy example, one of many? An advertisement recently appeared in the newspapers in my state with this heading: 'Need a Weekend Away with Your Convivant, Married or Not?' That Convivant is a rather intriguing word in itself, but the fascinating thing is that this ad was placed by one of our large universities. It goes on: 'Spend prime time and energy with your partner in a secluded setting revitalizing your relationship. Life planning for couples is an opportunity to mutually examine values and goals as separate persons and as part of a pair. Explore expectations for each other as men and women. Plan ways to achieve personal and mutual goals and deepen communications for intimate relationships.' Is this what universities are for? The possible benefits, social overtones, or propriety of such a weekend course are not the issue. What you have to ask yourself, as I have, is this: Is this the kind of course I can defend as a legitimate addition to the curriculum of my college or university? Can you defend such a course before those who support it through taxation or contribution?"[5]

3. Literacy learning refers to learning at the academic level of elementary and secondary schools directed toward reading, writing, arithmetic and elementary mathematics, the rudiments of geography, history, civics, and so on. It is intended for people whose education has been cut short at the elementary or secondary level. As all studies show, elementary and secondary education produce rich returns on the investment, greater than the returns from higher learning, simply because in a highly technical and interdependent society the range of opportunities open to people of limited education is severely restricted. Even a little learning at this level yields substantial returns. My impression is that literacy learning is not developed in the United States in proportion to the need. We operate on the assumption that almost everyone has completed grade school and has had at least some exposure to high school. This may be true, but it ignores the many who gained little from their formal education and ignores many others whose childhood was spent in other countries. The situation is such that millions of our people are condemned to lives of ignorance.

4. Occupational learning is related to manual and clerical skills that

ordinarily do not depend heavily upon higher learning. These skills include, for example, those utilized in the building trades, cosmetology, clerical work, auto mechanics, short-order cooking, and so on. This kind of learning takes place informally, through apprenticeships or other on-the-job training, and through instruction in high schools, specialized public vocational schools, community colleges, government manpower programs, and proprietary schools. It is evident, nevertheless, that millions of people who could benefit from this kind of learning are not being served. It may be argued that more widespread job training would help to reduce unemployment, personal frustration, and crime among teenagers--especially minorities--for whom unemployment rates are at exceedingly high levels. It may be argued also that more job training would increase national productivity. However, occupational learning without literacy learning may be fruitless. The two are complementary. In the United States today, there are few jobs that can be held by people who cannot speak, read, or write English, and calculate.

5. Finally, higher learning refers to liberal learning beyond the secondary level and vocational learning in fields that demand a significant intellectual ingredient.

All five of these types of learning are conducted partly through independent study or practice and partly through the interventions of institutions. Higher educational institutions participate in all five types of adult learning. All colleges and universities have a small but noticeable influence on environmental learning; many colleges and universities, especially community colleges, have a role in hobby learning, literacy learning, and occupational learning; and all of higher education is deeply involved in higher learning. However, other institutions, especially vocational schools of various types, employers, libraries, museums, clubs, churches, local school districts, and other organizations have major roles--especially in hobby learning, literacy learning, and occupational learning.

The chief concern of colleges and universities, of course, is higher learning. This field is shared to a small extent by other organizations, and some higher learning takes place through independent study, especially among professional people and others with substantial educational backgrounds. But most higher learning requires institutional support in the form of teachers, peers, counselors, libraries, laboratories, and other facilities that colleges and universities have. Although one of the major purposes of institutions of higher education is to prepare students to become independent learners, most people find the facilities, the guidance, and the personal associations offered by colleges or universities to be essential to the pursuit of fundamental and sustained learning, at least until they have attained a certain degree of mastery of their fields.

When fundamental or sustained higher learning occurs independently outside institutional walls, it can easily be given recognition as experiential learning within the institutional system of credits and degrees. For many learners this is an advantage that links independent study or experience with resident institutional study. In my opinion, independent study or experience should be fully integrated into the regular programs of all colleges and universities.

I am not suggesting that serious higher learning should be a monopoly of colleges and universities. On the contrary, much of it can be independent of all institutions; and much of it can be carried on in institutions other than colleges and universities. But I am suggesting that higher learning is the main business of colleges and universities; that a large

part of higher learning is now, will, and should be conducted under the aegis of higher educational institutions; and that much of the higher learning that takes place outside the walls of universities and colleges should be eligible under rigorous standards and procedures for recognition by these institutions.

INTEGRATING OLDER ADULTS INTO HIGHER EDUCATION

Historically, colleges and universities have had no difficulty in dealing with students of all ages so long as they could meet normal admissions requirements, could be present on the campus, and could be enrolled in regular degree programs. Many institutions, however, gave little encouragement to older students even when they could attend full time, and many discouraged part-time students of all ages. But a growing number of institutions offered summer programs that were originally regarded as a concession to older students--especially teachers--but that developed into a regular term, available to students of all ages. In addition, some institutions offered night classes, Saturday classes, and correspondence courses. These, however, tended to be separate from regular programs--often taught by different faculty members, attended by different students, and considered in some sense inferior to the regular programs. In addition, increasing numbers of institutions organized noncredit short courses and conferences mostly as continuing education for farmers and their wives, labor leaders, businessmen, and professional people. And some, especially land-grant institutions, offered extension services to farmers and other groups. These continuing education and extension activities were on the whole regarded as separate from the regular programs of the institutions and did not produce academic credits.

Meanwhile, especially since World War II, community colleges developed. They broke away from the rigidities of the older four-year institutions. It is only a slight exaggeration to say that they offered virtually any subject for which a demand existed or could be created and for anyone who wished to learn part time or full time. They offered courses on any schedule and at any place that seemed convenient to the learners. Since public community colleges were established in almost every center of population in the United States (nearly 900 of them serving almost 4,000,000 students and many operating branches), their campuses became readily accessible to large masses of the population, young and old.

The success of the community colleges taught the four-year institutions about the size and variety of the market for adult learning and interested many of them in finding a place in this market. Interestingly, in recent years some four-year colleges have become so aggressive that one now hears complaints from community college educators about the new competition they are facing. But on the whole, the four-year institutions are still groping to find a suitable posture toward nontraditional students, and many are continuing to hold these students at arm's length, either by excluding most of them or by shunting them into separate programs. There are literally millions of people of all ages who are potential adult learners but who are so situated that they cannot take part in regular programs designed for full-time resident students. A few types may be cited:

Those who want to get ahead by overcoming educational limitations

Late bloomers who lacked readiness at age 18

College dropouts who wish to finish belatedly

Career changers

Career updaters

Independent learners, some of whom wish formal recognition of what they have learned

Housewives with children at home

Handicapped people

Institutionalized people

Elderly people

Precocious young people below the usual college age

Those who love learning for its own sake

Some of these cannot take part in regular programs because of conflicting demands of family or career, some cannot take part because they lack the financial means, and some do not take part because they are unaware of existing opportunities. Some are able to engage in independent study but need or wish formal recognition of their achievements; most need teaching in order to progress with their studies; many have never thought of the possibility of becoming better educated and need encouragement; most need guidance to get started and also to help them along the way.

The problem in serving these potential students is to shape the programs of colleges and universities so that these people are physically and psychologically able to take part while keeping the programs equal in quality to those provided regular full-time resident students. For many reasons, this is not an easy problem to solve. Some institutions offer shoddy programs that are available to many students; some offer excellent programs in which few students can take part; others simply opt out of the nontraditional market.

Some Principles and Proposed Guidelines

Experience with adult learning in higher educational institutions has yielded several well-established guidelines or principles--some applicable to the institutions and some applicable to funding agencies.

1. Adults of all ages can learn. There may be minor differences in the rate of learning among persons of different ages, but no institution can opt out of the adult field on the ground that adults in mid-life or old age are incapable of learning. Moreover, the experience of teachers everywhere is that the presence in college classes of older adults, with their experience and perspective, is beneficial to younger students in the same classes.

2. Many potential adult learners need guidance in the form of unbiased information about available educational opportunities, informed advice relating to their own educational plans, and encouragement to help them overcome anxieties. Learners often must choose among different institutions, various combinations of independent and institutional study, and numerous programs of study. Many can benefit from the advice of qualified and disinterested counselors or "brokers" who are informed about the range of possibilities. Unfortunately, guidance tends to be a weak spot in education at all levels. It is so important for adult learners that today leaders in adult education are making strenuous efforts to create guidance facilities that will serve the needs of the varied population of older students. It is to be hoped that such facilities, if indeed the necessary finances and wisdom can be developed, may be open to college students of conventional age as well.

3. Admissions and residence requirements must be flexible. The rigid requirements imposed on younger students are perhaps defensible. But for older adults, whose life experiences and responsibilities to their jobs and families are varied, the conventional requirements often become impracticable if not meaningless. In admissions decisions, each student should be evaluated in terms of his or her own qualifications. And it should be possible for students to be admitted readily as nondegree candidates or on probation so that they can demonstrate their competence before admission to degree-candidate status. In some institutions, these more flexible admissions procedures may also be applied to students. As for residence requirements, they must be compatible with students' personal obligations--and this is where one compromise with traditional academic practice must be made.

4. Instructional programs should be offered at times and places

accessible to people with job and family obligations. This will require summer, evening, and weekend programs, short courses, classes at locations off the campus, instruction by correspondence, TV, radio, computers, newspapers, and so on. Various forms of independent study should also be encouraged and given adequate recognition. Indeed, adult learners should receive every encouragement to carry on studies independently. Combinations of independent study and group instruction are fruitful. Contact with learning centers located near students' homes may prove helpful. If possible, however, full-time residence on a campus for at least part of an educational program is desirable, and ways to make this physically and financially possible should be sought. It is as important for older adults as for persons of conventional college age to utilize the full resources of the campus for at least part of their educational careers.

5. The content of courses and methods of instruction should be adapted to older adults who are inclined to be more pragmatic and more definite in their objectives than younger students sometimes are. Adults are also likely to be less tolerant of sloppy instruction; adjustments to provide for the demands of older adults may well improve the instruction offered for the younger students. The pragmatic needs of older students may lead them to overlook the importance of liberal arts courses, but their role should be as significant in the education of older students as it is in that of younger students.

6. It has been common practice in the past to assign less qualified faculty members to evening and other extension classes than to the regular programs. Many teach part time only and even those who do teach full time are often less qualified than are the regular faculty members. This condition has come about partly because of the regular faculty's dislike of evening and weekend work or of travel, and partly because of the low budgets for programs for older adults compared to the budgets for regular programs. This discrimination between the two categories should be eliminated.

7. Older students and younger students work successfully side by side, as was demonstrated during the post World War II era, and is proved today in numerous graduate classes where the age spread is wide. The modes of instruction suited to older adults and those appropriate for younger adults are not different. The differences are on the whole not so much educational as in the circumstances of the learners that force some to be part-time, irregular students while others are full-time, regular students. Whenever practicable, students from both groups should be in the same classes, and the two programs should be integrated as fully as possible. There should be no first-class and second-class students, and no high standards for some and low standards for others. The two groups should operate under standards that are identical or comparable when for practical reasons they cannot be the same. The principle of comparability should apply to guidance; admissions and residence requirements; degree requirements; course content; instructional methods; faculty qualifications; budget; and program status. Older students should not be relegated to second-class educational programs because of age.

8. The institutional cost for older adults is no less than that for younger students. Except insofar as programs for older students are inferior to those available to regular students, the costs for the two groups will be about the same. If both are of the same quality, both will require administrative overhead, teachers, guidance, examinations, and use of classrooms, laboratories, libraries, and other campus facilities. If it is found that savings are possible in programs for older adults without

sacrifice of quality, the same economies could and should be put into practice in the regular programs. For example, if through programs for older adults educators learn to use TV efficiently without sacrifice of quality, that knowledge would be immediately applicable to regular programs. In fact, studies of instructional costs for adult programs generally show that costs for programs of comparable quality are about as great as those for conventional instruction. When costs are less for older-adult programs, the reason is that the caliber of faculty is lower, that the supporting services are less generous, or that not all the overhead costs are counted. It must be conceded, however, that in the course of learning how to deliver instruction to older adults, educators have in some cases learned how to produce instruction of high quality at costs lower than those in conventional programs. Apparently this has happened, for example, at the Open University in Britain. This achievement should not lead to the conclusion that the cost of education for older adults should be less than the cost of regular programs, but rather suggests that the cost of regular programs should be reduced.

In judging the relative costs of instruction for older adults, a distinction dear to the hearts of economists is sometimes made between average cost and marginal cost. If instruction of older adults is regarded as a by-product of the regular programs, if it uses the same physical plant, the same general administrative staff, the same library and computer facilities, the same scientific equipment, and so on, the marginal (or incremental) cost per credit hour of adult learning may be smaller than the average cost of providing the regular program. Viewed in this way, adult learning may seem to come at a lower cost and in some cases even to be profit making at reasonable rates of tuition. But the lower cost is achieved by arbitrarily exempting adult learning from an equitable share of capital and general administrative costs and by loading all these costs on the regular programs. Assuming that learning for older adults is as worthwhile as learning for younger adults, both having the same objective and requiring comparable programs, it is difficult to see why they should not share equitably the overhead costs. This point is important in connection with finance. It suggests that tuition rates should be comparable. It also suggests that government support, ordinarily given on the basis of full-time-equivalent enrollments, should be the same for older adult learning as for regular programs. Certainly, public agencies should not operate on the theory that less money per student is needed for adult learning programs than for conventional ones. Rather, the public posture should be that the two types of programs are comparable and that, if one can operate more cheaply than the other without sacrifice of quality, the less efficient program should come into line with the more efficient one.

9. Subsidies from public and private sources should not be less for educational programs for adult learners than for programs designed for traditional students. The social benefits from adult learning are fully comparable to those derived from educational programs for traditional students and the arguments for subsidy are equally compelling. In particular, state formulas for the financing of colleges and universities and tuitions and fees should be comparable, if not equal, for students of all ages and types.

10. When older adults take part in higher education, there are considerable student-related costs (as distinguished from costs related to the operation of the colleges or universities). These student-related expenses include baby-sitters, transportation, books, equipment, and supplies. Older

adults who attend part-time programs do not bear the cost of foregone income to the same extent as full-time students. But they are not wholly exempt from foregone income since they sometimes interrupt their careers for periods of full-time study, lose overtime pay, or lose out on job assignments that involve travel or transfer; and the time and energy used up in adult learning may reduce their efficiency on the job. But in general the cost in foregone income is less than that for regular full-time students. However, offsetting this advantage wholly or in part are significant nonmonetary costs in the form of sacrifices of family life, rest, and recreation. All these costs, monetary and nonmonetary, are for millions of people barriers to their participation and should be recognized in the financial provisions made for adult learning.

11. If adult learning is to expand in proportion to the need and the opportunity, it must be financially accessible through low tuitions, financial aid to students, or both. The financial problem of extending education to persons of varied means does not differ much between older adults and younger adults. It is well known that adult learning activity tends to be concentrated among persons who already have considerable education. This is partly because educated people appreciate the value of education, partly because they are good at it and are secure in their ability to succeed, and partly because they are relatively affluent and can afford it. If adult learning is to be extended to large numbers of less educated and less affluent people, substantial amounts of financial aid will be necessary. The most important form of financial aid is low tuition. As Fred Harvey Harrington (1977, p. 192) has pointed out, "Free service has long been a feature of cooperative extension, and helps explain why it has become the nation's most successful higher education operation for adults." But even with low tuition, there would be many circumstances that call for student financial aid for older adult learners, especially because many potential learners are of the age when they are establishing homes and families on modest incomes or have children who are approaching college age. For example, there are many married women who wish to resume their education at the very time when their own children are approaching college age and any family educational funds must be fully committed to the children's education. Or young husbands and wives may both have educational aspirations which in combination exceed their means. Or people with very low income may simply have no surplus funds for education. It is not hard to identify examples of potential students who need aid. For them, two of the most important forms of aid for conventional students are seldom practicable: loans (because these people already are deeply in debt for houses, cars, and, in some cases, for past education) and part-time work (because these people are already working full time). The student aid program for regular students should be extended to older adult learners on the principle of "different but comparable." In the realm of cost and finance, programs for older adult learners should be basically the same as those for younger learners. The only differences would be those arising from the special circumstances of the older adults.

12. It is often argued in connection with adult learning opportunities that supply should respond to demand--that new supply should be created only when there is palpable demand. This concept is contrary to the traditions of American higher education. Supply has always run ahead of demand and there has scarcely ever been a time when persons wishing to pursue higher education--and even minimally qualified--were unable to find an institution that would accept them. The normal schools, the church-related

colleges, the state universities, the land grant institutions, the community colleges, and so on, were all reaching out to provide opportunity ahead of demand. The fact that most colleges and universities have been concerned year after year with recruiting enough students to fill their capacities indicates that supply is continually ahead of demand. Moreover, the many programs of student aid, both institutional and governmental, have traditionally been designed to encourage attendance. The same philosophy is called for in the case of adult learning, and to some extent it prevails. However, the nation has been timid and discriminatory in this field. Programs have often been required to be self-supporting or even profit making, with the result that educational quality has been relatively low, tuition relatively high, and student aid not widely available.

As K. Patricia Cross has said (1978, p. 24): "The point is that planning for the learning society cannot be done safely on the basis of marketing surveys and consumer demand. The average adult can only respond on the basis of relatively limited knowledge and experience. Progress in uncharted domains is not generally made by responding to requests for the things people have already experienced; it is more likely to come about through the imagination of people who see a need and can propose a better way of doing things. This is not to recommend doing away with needs assessments and certainly not to suggest remaining aloof and out of touch with the learning needs of the average adult. It is to suggest that planning for the learning society will be inadequate and always somewhat behind the times if planning and funding are based on pedestrian implementation of the 'demand' figures from the admittedly valuable background information provided by the needs assessments."

13. Because of the actual or impending fall in enrollments of traditional students, many institutions have entered the field of adult learning with the hope of maintaining otherwise falling total enrollments. Entry into the field has been almost a stampede and this has had both positive and negative effects. On the positive side, it has brought about a great increase in the number of serious adult learners. It has produced much innovation in educational content and method, some of which has influenced regular programs favorably. And it has helped to alleviate the financial problems of some institutions. On the negative side, some programs designed with an eye to financial benefit for the institutions have been ill conceived and even shoddy, and adult learners have been exploited. Accrediting organizations have been unable to evaluate adult learning adequately, especially because much of it does not share the institutions' regular faculty, facilities, and philosophy. There is a need for accrediting bodies to give special attention to adult programs in appraising the overall worth of institutions. No institution should receive accreditation, even though its main program may be unexceptionable, if its adult learning programs are not up to a comparable standard.

Conclusions

My conclusions are two-fold. The first relates to the possibility that American institutions of higher education may develop excess capacity in the next decade or two. Because of the decline in the birth rate beginning in the early 1960s, the number of persons aged 18 to 21 will decline in the 1980s and the pool of traditional college applicants will diminish. Many institutions may develop excess capacity. This circumstance is generally viewed by educators with foreboding, but it should be viewed as an opportunity. It means that resources in the form of teachers, supporting staff, buildings, and equipment could become available for new educational uses, among them quality improvement, expansion of research and public service activities, and especially expansion and improvement of programs for new clienteles, including adult learners. The potential number of adult learners alone is more than ample to use up all the excess capacity. The social benefits of putting idle educational resources to use would more than justify the modest costs of retaining existing resources in higher education rather than shifting them to other industries.

The second conclusion pertains to the place of higher education in the development of adult learning. Adult learning is a way of hastening the achievement of the goal of "a nation of educated people." The higher educational system should increase its efforts in the area of adult learning. Institutions and funding agencies should work toward full integration of programs for traditional students and for older adult learners. The two programs should become identical as far as possible, and otherwise comparable, with respect to curricular offerings, facilities, educational quality, financial aid, and public and private subsidies.

Appendix

THE DEMOGRAPHIC SITUATION

As shown in Table A1, the number of births increased substantially during and after World War II, rising from 2,570,000 in 1940 to a plateau of about 4,300,000 in 1957 to 1961. From 1962 on, the annual number of births declined steadily until 1973. Since 1973, the number has been about stable at the level of about 3,150,000.

Table A1. Number of Births, United States, 1930 to 1976 (in thousands)

1930	2,618	1954	4,102
1931	2,506	1955	4,128
1932	2,440	1956	4,244
1933	2,307	1957	4,332
1934	2,396	1958	4,279
1935	2,377	1959	4,313
1936	2,355	1960	4,307
1937	2,413	1961	4,317
1938	2,496	1962	4,213
1939	2,466	1963	4,142
1940	2,570	1964	4,070
1941	2,716	1965	3,801
1942	3,002	1966	3,642
1943	3,118	1967	3,555
1944	2,954	1968	3,535
1945	2,873	1969	3,630
1946	3,426	1970	3,739
1947	3,834	1971	3,556
1948	3,655	1972	3,258
1949	3,667	1973	3,137
1950	3,645	1974	3,160
1951	3,845	1975	3,144
1952	3,933	1976	3,165
1953	3,989		

Source: United States Department of Commerce, Bureau of the Census, Current Population Reports, Series P-25, No. 521, 541.

The outlook, however, is for a rising number of births over the next decade because of the increased number of women of prime child-bearing age--these are women who were born in the 1950s and 1960s. This increase would happen even if the birth rate (number of births per thousand women) remained at the unprecedentedly low level of the past few years.

The big rise in number of births from World War II to the early 1960s and the subsequent decline were, of course, events of overwhelming consequence in all aspects of our social life. They will continue to reverberate for decades or even centuries into the future. However, from the figures on births, one cannot draw direct and instant conclusions about the trend of future college enrollments 18 years later. College enrollments are not determined primarily by the number of 18-year-olds. In fact, the 18-year-olds make up only about one-eighth of total enrollments in higher education. Students in higher education are drawn from all age groups from 15 to 80 or more. Indeed, the average age of the student population is steadily rising as the participation of older groups increases. Thus, the effect of changes in number of births is not concentrated in the entering class 18 years later but is spread over many years. Moreover, enrollment is influenced by many factors affecting the percentages of age cohorts attending college.

Predictions of future enrollments inevitably are based on arbitrary assumptions about the number of persons who will be in each age group of the population and about the percentage of each age group who will attend college. Depending on those assumptions, one can end up with virtually any prediction that suits one's prejudices. Often such predictions tend to create the impression that future enrollments are preordained by forces outside human control. They play down the possibility that enrollments can be influenced by conscious policy. My interest, therefore, is not in predicting what enrollments will be, but in discovering the range of possibilities and in exploring the kinds of policies that will yield a level of enrollment that is in the broad public interest.

From this point of view, I developed one illustrative projection of higher educational enrollments for the rest of the twentieth century. I present this not as a prediction but only as one possibility. It illustrates that the much-heralded future decline in enrollment may be by no means inevitable. To make the projection I simply estimated for the years 1977 to 2000 the total population by age groups and the percentage of each age group who would attend college. My assumptions were as follows:

1. That the birth rate (average number of lifetime births per 1,000 women) would hold steady at 2,100 throughout the period. This is a replacement level birth rate, that is, the fertility required for the population to replace itself in the absence of net immigration. A recent survey conducted by the Bureau of the Census indicates that American women expect to have, on the average, 2,110 births per thousand.
2. That the college participation of each age group would be as follows:
   a. For those in the 16 to 17 and 18 to 21 age groups, the percentage would remain the same as in recent years.
   b. For those in the 22 and over age group, the percentage attending would increase steadily over time according to a straight-line projection of the increase from 1970 to 1976.

The population projections by age groups are shown in Table A2. These are official projections of the Bureau of the Census known as series II, meaning that they are the middle one of three different projections. The pro-

Table A2. Projection (not a Prediction) of the United States Population, by Age Groups, 1976-2000 (in thousands)

Year	16-17	18-21	22-24	25-29	30-34	35 and over	Total: 16 and over	Total: 18 and over
1976 . . .	8,397	16,771	11,395	17,806	14,238	89,718	158,324	149,927
1977 . . .	8,442	16,970	11,655	17,745	15,416	90,767	160,996	152,554
1978 . . .	8,425	17,106	11,874	18,055	15,894	92,183	163,535	155,110
1979 . . .	8,279	17,156	12,143	18,451	16,558	93,396	165,982	157,703
1980 . . .	8,157	17,117	12,346	18,930	17,242	94,544	168,335	160,179
1981 . . .	7,929	17,018	12,494	19,324	18,138	95,595	170,498	162,569
1982 . . .	7,549	16,875	12,483	19,775	18,086	98,747	172,428	164,879
1983 . . .	7,236	16,499	12,523	20,140	18,400	99,430	174,227	166,990
1984 . . .	7,056	15,988	12,491	20,405	18,798	101,172	175,911	168,855
1985 . . .	7,020	15,442	12,411	20,581	19,278	106,422	177,607	170,587
1986 . . .	7,151	14,871	12,212	20,771	19,674	104,687	179,367	172,215
1987 . . .	7,317	14,520	11,925	20,737	20,126	106,555	181,182	173,865
1988 . . .	7,092	14,470	11,497	20,631	20,487	108,484	182,660	175,568
1989 . . .	6,603	14,600	11,029	20,475	20,747	110,471	183,923	177,321
1990 . . .	6,345	14,506	10,641	20,169	20,917	112,503	185,082	178,737
1991 . . .	6,351	14,177	10,508	19,600	21,106	114,548	186,291	179,940
1992 . . .	6,382	13,685	10,555	19,017	21,068	116,710	187,418	181,035
1993 . . .	6,397	13,198	10,759	18,417	20,959	118,847	188,577	182,181
1994 . . .	6,555	12,971	10,622	17,919	20,800	120,939	189,806	183,251
1995 . . .	6,783	12,995	10,228	17,665	20,489	122,981	191,139	184,357
1996 . . .	7,074	13,184	9,680	17,691	19,914	125,060	192,603	185,529
1997 . . .	7,388	13,432	9,506	17,514	19,327	127,030	194,197	186,809
1998 . . .	7,644	13,888	9,463	17,242	18,727	128,906	195,872	188,227
1999 . . .	7,813	14,434	9,555	16,858	18,233	130,697	197,589	189,776
2000 . . .	7,924	14,990	9,663	16,469	17,981	132,298	199,324	191,400

Source: United States Department of Commerce, Bureau of the Census. "Projections of the Population of the United States: 1977 to 2050," Current Population Reports, Series P-25, No. 704, July 1977, pp. 28, 37-60.

jections of the percentage of each age group expected to attend college are presented in Table A3. These projections assume that there will be no decline in the attendance rate of any age group and that recent trends toward increasing participation of older age groups will continue.

Applying the projected percentages to the projected population for each age group yielded the projected college enrollments shown in Table A4. They show a steady and persistent increase in total enrollment over the entire period from 1976 to 2000. Though there are projected decreases in the enrollment of persons in the 16 to 17 and the 18 to 21 age groups in the late 1980s and early 1990s, increases in enrollment of the older age groups would be off-setting so that total enrollment would increase without interruption. These figures, however, include both full-time and part-time students and must be converted to full-time-equivalents in order to show the net effect on college enrollments. This conversion is made in Table A5. Because most older persons attend college part-time, the projected growth of enrollment in full-time-equivalents is much less than that for the total

Table A3. Percentage of Total Population Attending College, by Age Groups, Actual 1960-1976 and Projected (not Predicted) 1980-2000*.

	16-17	18-21†	22-24	25-29	30-34	35 and over
Actual:						
1960	--	23.1%	8.3%	4.7%	2.3%	--
1965	--	30.8	12.6	5.7	3.0	--
1970	--	33.9	14.3	7.0	3.7	--
1971	--	34.5	14.8	7.6	4.6	--
1972	--	33.2	14.4	8.4	4.4	--
1973	--	31.0	14.0	8.3	4.3	--
1974	--	31.3	14.7	9.3	5.4	--
1975	--	33.5	15.7	9.7	6.2	--
1976	3.4	33.4	16.8	9.8	5.7	1.4
Projected:						
1980	3.4	33.4	17.7	11.2	7.2	1.7
1985	3.4	33.4	18.8	13.0	8.9	2.3
1990	3.4	33.4	19.8	14.9	10.5	2.8
1995	3.4	33.4	20.9	16.7	12.2	3.4
2000	3.4	33.4	22.0	18.3	13.8	4.0

*These data are available annually, though they are shown here quinquennially.
†Averages of separate data for ages 18-19 and 20-21.
Sources: Figures for 1960-1975: United States Department of Commerce, Bureau of the Census, Social Indicators 1976, 1977, p. 301. These data were derived from Bureau of the Census, Current Population Reports, Series P-20, Nos. 34, 66, 110, 162, 222, 241, 260, 272, 294. Figures for 1976: Bureau of the Census, Current Population Reports, Series P-20, No. 319, 1978, p. 11. Projections for 1980 to 2000: for 16-17 and 18-21 groups, assumes same percentage as in 1976; age groups 22-24, 25-29, and 30-34, assumes that upward straight-line trend of percentages in 1970-1977 will be continued to the end of the century; for 35 and over group, an arbitrary guess of the author.

head count. Yet, even these projections show a remarkably stable enrollment with no periods of substantial decline of the kind so often envisioned.

I am not arguing that these projections predict accurately what will happen, but that they are well within the range of possibility. They represent something that could be attained, and I conclude from them that the oft-predicted depression in higher educational enrollments is not inevitable--although it is not inconceivable.

The projections I have presented cover only the remainder of this century--a period of 20 years, but it is of interest to look beyond the year 2000. Table A6 shows Bureau of the Census population projections for the first half of the twenty-first century. These long-range projections are based on the assumption of a fertility rate of 2,100 lifetime births per thousand women, or the rate needed to maintain the population. As shown in the table, under the assumptions made, a sizable increase in the younger age groups may be expected.

Before concluding my comments on the enrollment outlook, I should like to mention some factors that may tend to offset the negative effect of the

declining birth rate and the weakening job market for college graduates. The American family has been undergoing change. It is becoming predominantly a two-earner family, with fewer children, and with the children spaced farther apart in age than formerly. These changes affect the financial ability of families to afford higher education. In addition, the spread of education in our society is tending to strengthen the desire of parents to send their sons and daughters to college. At the same time, it is increasing the demand for adult education because educated people are big consumers of adult education.

Another factor is that the nation is nearing the end of the congestion in the labor market due to the glut of young people seeking jobs. In another decade, the number of young job seekers will be considerably smaller and the job outlook should improve.

Declines in enrollment have stimulated the entrepreneurial ability of colleges and universities, many of which have shown themselves to be nimble in developing new markets. The new market mentality may in some cases mean lowered standards or sacrificed liberal arts traditions, but in some cases may open up new opportunities for useful service. Traditional

Table A4. Projected (not Predicted) College Enrollments, by Age Groups, 1976-2000 (in thousands)*

	16-17	18-21	22-24	25-29	30-34	35 and over	Total
1976	281	5,335	1,846	1,686	803	1,189	11,140
1977	287	5,668	1,981	1,792	956	1,362	12,046
1978	286	5,713	2,042	1,896	1,049	1,383	12,369
1979	281	5,730	2,125	2,011	1,143	1,494	12,784
1980	277	5,717	2,185	2,120	1,241	1,607	13,147
1981	270	5,684	2,236	2,242	1,360	1,721	13,783
1982	257	5,636	2,259	2,373	1,429	1,876	13,830
1983	246	5,511	2,292	2,477	1,509	1,989	14,024
1984	240	5,340	2,311	2,591	1,598	2,125	14,205
1985	239	5,158	2,333	2,676	1,716	2,448	14,470
1986	243	4,967	2,320	2,763	1,810	2,512	14,615
1987	249	4,850	2,290	2,862	1,912	2,664	14,827
1988	241	4,833	2,230	2,909	2,028	2,821	15,062
1989	225	4,876	2,162	2,969	2,116	2,983	15,331
1990	216	4,845	2,107	3,005	2,196	3,150	15,519
1991	216	4,735	2,112	2,979	2,301	3,322	15,665
1992	217	4,571	2,195	2,948	2,360	3,501	15,792
1993	217	4,408	2,206	2,947	2,410	3,684	15,872
1994	223	4,332	2,199	2,921	2,454	3,870	15,999
1995	231	4,340	2,138	2,950	2,500	4,181	16,340
1996	241	4,403	2,042	3,007	2,489	4,377	16,559
1997	251	4,486	2,034	3,030	2,474	4,573	16,848
1998	260	4,639	2,044	3,052	2,453	4,770	17,218
1999	266	4,821	2,083	3,034	2,461	4,966	17,631
2000	269	5,007	2,126	3,014	2,481	5,292	18,189

*Source: These are the results of applying the attendance percentages shown in Table A3 to the population data in Table A2. The data include both full-time and part-time students.

Table A5. Projected (not Predicted) Full-Time-Equivalent Enrollments, 1976-2000 (in thousands)

Year	Number of full-time-equivalent students	Year	Number of full-time-equivalent students
1976	8,355	1989	10,578
1977	9,035	1990	10,708
1978	9,153	1991	10,809
1979	9,460	1992	10,739
1980	9,597	1993	10,793
1981	10,062	1994	10,719
1982	10,096	1995	10,947
1983	10,097	1996	11,095
1984	10,228	1997	11,120
1985	10,274	1998	11,364
1986	10,377	1999	11,460
1987	10,379	2000	11,823
1988	10,543		

Source: Estimated from total enrollment as shown in Table A4 on the basis of the ratio of full-time-equivalent enrollment to total enrollment in United States Department of Health, Education, and Welfare, National Center for Education Statistics, Projections of Education Statistics to 1985-86, Washington, D.C.: United States Government Printing Office, 1977, pp. 16, 20.

Table A6. Population Projections (not Predictions) by Age Groups, 2000-2050 (in thousands)

Year	15-17	18-24	25-29	30-34	35 and over	Total: 16 and over	Total: 18 and over
2000	19,727	24,653	16,469	17,981	132,298	199,324	191,400
2005	20,366	27,872	16,621	16,782	138,530	207,905	199,806
2010	19,707	28,362	19,302	16,944	142,999	215,392	207,608
2015	18,787	27,279	19,913	19,623	146,987	221,223	213,802
2020	19,024	26,307	19,283	20,231	152,828	226,226	218,648
2025	20,190	26,978	18,408	19,595	158,272	231,323	223,252
2030	20,953	28,554	18,637	18,724	161,921	236,176	227,835
2035	20,859	29,357	19,761	18,965	163,597	239,948	231,680
2040	20,530	29,116	20,496	20,092	164,730	242,568	234,433
2045	20,672	28,769	20,400	20,819	166,591	244,796	236,579
2050	21,297	29,123	20,068	20,708	169,193	247,576	239,092

Source: United States Department of Commerce, Bureau of the Census, "Projections of the Population of the United States: 1977 to 2050," Current Population Reports, Series P-25, No. 704, July 1977, p. 70.

colleges and universities have been joined in the search for educational markets by high schools, proprietary institutions, libraries, museums, government agencies, the armed forces, private corporations, labor unions, and other organizations. There is a question as to how the higher educational market will be divided in the future. Moreover, various types of colleges and universities will fare differently in the competition for students.

Finally, in appraising the future of higher educational enrollments, one must recognize that the best predictions will go awry if there is war, depression, hyper-inflation, or radical changes in values and life styles. And what in our experience so far in this century would lead us to think that we shall be immune from these events in the rest of the century?

Notes

1. Because data are available only biennially, there are no exact figures on the degree of change from year to year. The percentages given are undoubtedly less than the percentage changes from peak to trough.

2. However, it is not appropriate to assume that people during the Depression thought that recovery was just around the corner, or that people during World War II were certain that the war would last for only a few short years. To them, the promised land of prosperity and peace seemed a long way off.

3. For a provocative recent discussion of the effects of institutional bigness on higher education, see Smith and Bernstein, The Impersonal Campus, 1979.

4. However, assuming that a reduced scale of operation were sustained over a long period, the time would eventually come when depreciation and obsolescence would necessitate the resumption of capital spending, though perhaps at a lower rate in real dollars than at a previous time of higher enrollment.

5. Speech to the Association of Governing Boards, AGB Reports, May/June 1979, pp. 6-7.

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